

# Gaps and Resumptive Pronouns in Japanese Relative Clauses: A Preliminary Study

Hiroto HOSHI

## 1. Introduction

In this paper, I aim to clarify the nature of gaps and resumptive pronouns in relative clauses in Japanese. To attain this aim, I consider some of the important data about Japanese relativization and their implications for the Subjacency Condition in the following section (Ross 1967, Perlmutter 1972, Chomsky 1973, 1986, Kuno 1973, Haig 1976, Saito 1985, 1986, among others). In particular, there, I show how Saito (1985, 1986) reinterprets Perlmutter's (1972) analysis of Japanese relativization under Government and Binding Theory (Chomsky 1981). I also show that if their analysis is correct, it implies that the Subjacency Condition is part of our innate knowledge of language (Ross 1967, Chomsky 1973, 1981, 1986, among others; cf. Kuno 1973).

In section 3, I point out that although Perlmutter's (1972) and Saito's (1985, 1986) approach to Japanese relativization is plausible, there seem to remain some potential problems. In so doing, I attempt to question the validity of their theoretical claims about the Subjacency Condition, etc. There, I also argue that Saito's (1985, pp. 342-344) generalization about overt resumptive pronouns might indeed lead us to reconsider the nature of gaps and resumptive pronouns in relative clauses in terms of efficiency and complexity in parsing (Hawkins 1994, 1999, 2004, Phillips 1996, Kempson et al. 2001, Cann et al. 2005, Culicover and Jackendoff 2005, Hofmeister and Sag 2010, among others; cf. Chomsky 1965, Keenan and Comrie 1977).

In section 4, I adopt Saito's (1985, pp. 342-344) generalization that 'an overt resumptive pronoun is allowed only when it is embedded "deeply enough"' (cf. Keenan and Comrie 1977, Hawkins 1994, 1999, 2004, among others). By doing so, I attempt to show that if the generalization is correct, it could imply that not 'syntactic bi-clausal structure' but 'lexicalist mono-clausal structure' might be correct for complex predicate constructions such as Japanese causatives (cf. Kuroda 1967, Kuno 1973, Hale 1980, 1982, Farmer 1980, Miyagawa 1980, Hoshi 1994, Manning et al. 1999, among others). If the argument there is successful, it implies that there is a significant difference between Japanese causative structure and English causative one.

In section 5, I conclude the discussion of this paper.

## 2. Perlmutter's (1972) & Saito's (1985, 1986) Analysis of Relative Clauses

Kuno (1973) observes that the following relative clause constructions in Japanese are grammatical:

- (1) [S [NP  $e_i$   $e_j$  kawaiatte ita inu<sub>j</sub>]-ga sinde  
was-fond-of dog-Nom dying  
simatta] kodomo<sub>i</sub>  
ended-up-with child  
'\*a child<sub>i</sub> who [S [NP the dog<sub>j</sub>  $e_i$  was fond of  $e_j$  died]' (Kuno 1973, p. 239)
- (2) [S [NP  $e_i$   $e_j$  kite -iru yoohuku<sub>j</sub>]-ga yogorete-iru]  
wearing-is suit -Nom dirty-is  
sinsi<sub>i</sub>  
gentleman  
'\*a gentleman<sub>i</sub> who [S [NP the suit<sub>j</sub> that  $e_i$  is wearing  $e_j$  is dirty]' (Kuno 1973, p. 239)

In the relative clause in (1), there are two gaps.  $e_i$  is the subject of the predicate *kawaiatte ita* 'was fond of,' and  $e_j$  is the object. There,  $e_j$  is co-indexed with the lower relative head *inu* 'dog,' and  $e_i$  with the higher relative head *kodomo* 'child.' Similarly, there are two gaps in (2), the subject gap  $e_i$  and the object gap  $e_j$ . The empty object  $e_j$  is co-referential with the embedded relative head *yoohuku* 'suit,' and the subject  $e_i$  with the matrix relative head *sinsi* 'gentleman.' As the translations above show, the English counterparts of (1) and (2) are ungrammatical.

If Japanese relative clause constructions necessarily involve movement of the relative empty operator OP, we have structures (3) and (4) for (1) and (2), respectively. The OP movement of the object of the relative clause in (3) and (4) is suppressed for ease of exposition.

- (3) [OP<sub>i</sub> [S [NP  $t_i$   $e_j$  kawaiatte ita inu<sub>j</sub>]-ga sinde  
was-fond-of dog -Nom dying  
simatta]] kodomo<sub>i</sub>  
ended-up-with child
- (4) [OP<sub>i</sub> [S [NP  $t_i$   $e_j$  kite -iru yoohuku<sub>j</sub>]-ga  
wearing-is suit -Nom  
yogorete-iru]] sinsi<sub>i</sub>  
dirty -is gentleman

In (3), the subject gap  $e_i$  in (1) is created by the movement of the relative OP, and is a trace,  $t_i$ . Exactly in the same way,  $e_i$  in (4) is  $t_i$ , left behind by the movement of OP. If structures such as (3) and (4) are indeed correct structures for (1) and (2), Kuno's (1973, p. 242) claim should be considered to be plausible that the Subjacency Condition does not seem to apply to Japanese relativization (cf. Kuno's 1973 analysis of thematization; cf. Chomsky 1973, 1981, 1986, among others). This is so, because there are two bounding nodes, NP and S, which intervene between OP and  $t_i$  in both (3) and (4).

If, on the other hand, we consider Kuno's conclusion above is theoretically undesirable (Saito 1986, p. 331), and if we assume that the Subjacency Condition is one of the universal principles, i.e. part of our innate knowledge of language, with the bounding nodes being NP and S (cf. Rizzi 1982), both (3) and (4) cannot be legitimate representations for (1) and (2). Under this assumption, a question thus arises as to why (1) and (2) are well formed (cf. Japanese vs. English). To answer this question, Saito (1985, 1986) reinterprets Perlmutter's (1972) analysis of relativization under Government and Binding Theory (Chomsky 1981), and proposes the following: Unlike English relative clauses, Japanese ones do not have to involve movement, and gaps in relative clauses in Japanese can be empty pronouns (cf. 3 and 4). Consequently, Japanese relative clauses do not violate the Subjacency Condition, and the grammaticality of (1) and (2) is accounted for.

Saito's (1985, 1986) structures for (1) and (2) are given below:

(5) [S [<sub>NP</sub>  $pro_i$   $pro_j$  kawai<sub>gatte</sub> ita inu<sub>j</sub>]-ga sinde  
was-fond-of dog -Nom dying  
simatta] kodomo<sub>i</sub>  
ended-up-with child  
(cf. Saito 1985, 1986, cf. Perlmutter 1972)

(6) [S [<sub>NP</sub>  $pro_i$   $pro_j$  kite-iru yoohuku<sub>j</sub>]-ga yogorete-iru]  
wearing-is suit -Nom dirty-is  
sinsi<sub>i</sub>  
gentleman (cf. Saito 1985, 1986, cf. Perlmutter 1972)

As in (5), the empty subject of the predicate *kawai<sub>gatte</sub> ita* 'was fond of' can be the empty pronoun,  $pro_i$ , and the empty object is  $pro_j$ . There,  $pro_j$  is co-indexed with the lower relative head *inu* 'dog,' and  $pro_i$  with the higher relative head *kodomo* 'child' (cf. 3). As seen in (6), the empty subject of *kite-iru* 'wears' can be  $pro_i$  and the empty object  $pro_j$ .  $pro_j$  is co-referential with the embedded relative head *yoohuku* 'suit,' and  $pro_i$  with the main relative head *sinsi* 'gentleman' (cf. 4). In both (5) and (6), there are two bounding nodes, S and NP, which intervene between the higher relative head and the empty subject  $pro_i$ . According to Saito (1985, 1986), (5) and (6) are well-formed, because the Subjacency

Condition is a condition on movement (Ross 1967, Lasnik and Saito 1984, 1992), and is irrelevant to the structural distance between a relative head and its co-indexed pronoun (cf. 3 and 4). As a consequence, under Perlmutter's and Saito's approach to Japanese relativization, the grammaticality of (1) and (2) are accounted for in a principled manner.

Perlmutter's (1972) and Saito's (1985, 1986) analysis of Japanese relativization is independently motivated by the data like the following:

- (7) a. John-wa ano hon -o kaimasita ka?  
John-Top that book-Acc bought Q  
'Did John buy that book?'  
b. *pro* ano hon -o kaimasita ka?  
that book-Acc bought Q  
c. *pro pro* kaimasita ka?  
bought Q (Haig 1976, p. 364)

The examples in (7b-c) imply that given sufficient discourse information, Japanese can freely make use of an empty pronoun, i.e. Pronoun Drop (cf. Kuroda 1965, Kuno 1973, Haig 1976, among others). As Haig (1976, p. 364) claims, (7b) may be used if *John* has been established as topic under discussion. (7c) is possible when John's intended purchase of the book has been the topic of discussion. Given this property of Japanese, Perlmutter (1972) and Saito (1985, 1986) argue that if we can use an empty pronoun or Pronoun Drop freely in Japanese discourse, gaps in relative clauses in (1) and (2) should be able to be empty pronouns (see 5 and 6).

Perlmutter's (1972) and Saito's (1985, 1986) account for Japanese relativization appears to be supported by the following data as well, which are also discovered by Kuno (1973).

(8) [S [<sub>NP</sub> *zibun*<sub>i</sub>-ga  $e_j$  kawai<sub>gatte</sub>-ita inu<sub>j</sub>]-ga sinde  
self -Nom was-fond-of dog -Nom dying  
simatta] kodomo<sub>i</sub>  
ended-up-with child (Kuno 1973, p. 247)

(9) [S [<sub>NP</sub> *kare*<sub>i</sub>-ga  $e_j$  kite -iru yoohuku<sub>j</sub>]-ga  
he -Nom wearing-is suit -Nom  
yogorete-iru] sinsi<sub>i</sub>  
dirty-is gentleman (cf. Perlmutter 1972, p. 94)

(8) shows that the subject gap  $e_i$  in (1) can be replaced by the overt resumptive pronoun, *zibun* 'self.' (9) demonstrates that the gap  $e_i$  in (2) may be replaced by the copy pronoun, *kare* 'he.' Under Perlmutter's (1972) and Saito's (1985, 1986) hypothesis, gaps in Japanese relative clauses can be empty pronouns, and thus, there seems to be no surprise even if we are able to replace such zero pronouns with overt copy pronouns as in (8) and (9).

To repeat, under Perlmutter's and Saito's approach to Japanese relativization, gaps in the Japanese relative

clause in (1) and (2) can be an empty pronoun, *pro*. Hence, the structural distance from the higher relative head and the empty pronoun is not sanctioned by the Subadjacency Condition, as illustrated in (5) and (6) (cf. Kuno 1973; cf 3 & 4). The well-formedness of (1) and (2) is thus accounted for, and the claim that the Subadjacency Condition is part of our innate knowledge of language (Universal Grammar) is maintained. Furthermore, if Perlmutter's (1972) and Saito's (1985, 1986) analysis is correct, it could suggest that Japanese phrase structure is as 'configurational' as English phrase structure (see Hoji 1985, Saito 1985, 1986, among others; cf. Hale 1980, 1982, Farmer 1980, Chomsky 1981).

### 3. Potential Problems for Perlmutter's (1972) & Saito's (1985, 1986) Hypothesis

Saito's (1985, 1986) structures in (5) and (6) based on Perlmutter's (1972) insight appear to be plausible. Significantly, however, there appear to be some potential problems for them.

First, Haig (1976, p. 365, fn. 3) points out "pronominal traces," i.e. resumptive pronouns, in Japanese relative clauses are not, in general, allowed in singly embedded relative clauses.' Haig attributes this observation to Susumu Kuno. Observe the following:

- (10) a. [<sub>S</sub> e<sub>i</sub> yoohuku-o kite iru] sinsi<sub>i</sub>  
           suit -Acc wearing is gentleman  
           'the gentleman who is wearing a suit'  
       b. \* [<sub>S</sub> kare<sub>i</sub>-ga yoohuku-o kite iru]  
           he -Nom suit -Acc wearing is  
           sinsi<sub>i</sub>  
           gentleman  
           '\*the gentleman<sub>i</sub> who he<sub>i</sub> is wearing a suit'  
           (cf. Kuno 1973, p. 247)
- (11) a. [<sub>S</sub> e<sub>i</sub> inu-o kawaigatte iru] onna-no ko<sub>i</sub>  
           dog-Acc petting is girl -Gen child  
           'the girl who is petting a dog'  
       b. \* [<sub>S</sub> kanozyo<sub>i</sub>-ga inu-o kawaigatte iru]  
           she -Nom dog-Acc petting is  
           onna-no ko<sub>i</sub>  
           girl -Gen child  
           '\*the girl<sub>i</sub> who she<sub>i</sub> is petting a dog'  
           (cf. Kuno 1973, p. 247)

The empty subject in (10a) is replaced by the pronoun *kare* 'he' in (10b), resulting in ungrammaticality. The overt copy pronoun *kanozyo* 'she' in the subject position of the relative clause in (11b) induces ungrammaticality (see 11a vs. \*11b). Notice that in neither (8) nor (9), the resumptive pronoun is co-referential with the head of the relative clause that immediately contains it. On the other hand, in both (10b) and (11b), is the resumptive pronoun co-indexed with the head of the relative clause that immediately contains it. For this reason, there

seems to be a sharp difference in their grammaticality between (8/9) and (10b/11b), as Kuno and Haig claim.

By showing the following data, Saito (1985, pp. 342-344) claims that 'as in the case of English, we find much variation in the judgment of the speakers with respect to examples with overt resumptive pronouns.' Furthermore, Saito (1985, pp. 342-344) claims that 'Japanese is like English in that an overt resumptive pronoun is allowed only when it is embedded "deeply enough."' Hence, (12a) is much less grammatical than (13a).

- (12) a. \* [<sub>NP</sub> [<sub>S</sub> Mary-ga kare<sub>i</sub> -o nagutta] otoko<sub>i</sub>]  
           Mary-Nom he -Acc hit man  
       b. \* [<sub>NP</sub> the man<sub>i</sub> who<sub>i</sub> [<sub>S</sub> Mary hit him<sub>i</sub>]]  
           (Saito 1985, p. 343)
- (13) a. ? [<sub>NP</sub> [<sub>S</sub> Mary-ga [<sub>S</sub> kare<sub>i</sub>-no imooto-ga  
           Mary-Nom he -Gen sister -Nom  
           tensai -da to] omotte iru] otoko<sub>i</sub>]  
           genius-cop Comp think man  
       b. ? [<sub>NP</sub> the man<sub>i</sub> who<sub>i</sub> [<sub>S</sub> Mary thinks [<sub>S</sub> that his<sub>i</sub>  
           sister is a genius]] (Saito 1985, p. 343)

In (12a-b), the resumptive pronouns *kare* and *him* are co-indexed with the relative heads *otoko* and *the man*, respectively. According to Saito (1985), because those resumptive pronouns are not "deeply embedded enough," both (12a) and (12b) are unacceptable. On the other hand, in (13a-b), the resumptive pronouns *kare* and *his* are embedded inside S', and are regarded as being "embedded deeply enough" within the relative clauses. Thus, (13a-b) are both acceptable.

Similarly, Saito's (1985) generalization about overt resumptive pronouns seems to be able to account for the grammaticality of the following example, which is also discovered by Kuno (1973).

- (14) [<sub>NP</sub> [<sub>S</sub> watasi-ga [<sub>NP</sub> kare<sub>i</sub>-no namae]-o  
           I -Nom he -Gen name -Acc  
           wasurete simatta] okyakusan<sub>i</sub>]  
           forgot guest  
           'the guest<sub>i</sub> whose<sub>i</sub> name I have forgotten'  
           (Kuno 1973, p. 237)

In (14), the overt copy pronoun is *kare*, and it is co-indexed with the relative head *okyakusan* 'guest'. There, unlike the Genitive Case marked resumptive pronoun in (13a-b), the empty pronoun *kare* is not embedded within an embedded clause, S', but is still embedded inside the object noun phrase, [<sub>NP</sub> *namae*] 'name.' Hence, the resumptive pronoun *kare* 'he' in (14) is also considered to be "embedded deeply enough" (cf. \*10b, \*11b and \*12a-b). Consequently, (14) is correctly predicted to be as acceptable as (8), (9), and (13a-b) under Saito's (1985) generalization.

Notice here that the data and the above mentioned

generalization in this section are important, because they could indeed pose a potential problem for Perlmutter's (1972) and Saito's (1985, 1986) approach to Japanese relativization. This is so, because gaps in Japanese relative clauses can be empty pronouns under Perlmutter's and Saito's analysis (see 5 and 6). According to Kuno (1973), Haig (1976) and Saito (1985), such empty pronouns in Japanese relative clauses are replaced by overt copy pronouns, only when they are "embedded deeply enough." As shown below, however, typical empty pronouns in Japanese are freely replaced by overt pronouns depending on a variety of pragmatic context, even if they are not "embedded deeply:"

- (15) a. *e e e* ageta no?  
Gave Q  
'Did you give it to her?'  
b. *e e* sore-o ageta no?  
it -Acc gave Q  
c. *e* kanozyo-ni sore-o ageta no?  
she -to it -Acc gave Q  
d. anata-wa kanozyo-ni sore-o ageta no?  
you -Top she -to it -Acc gave Q

(15b-d) show that replaced overt pronouns do not have to be "deeply embedded" (cf. \*10b, \*11b and \*12a-b vs. 8, 9, 13a-b, and 14). In other words, when typical empty pronouns are replaced by overt pronouns in Japanese, they do not have to be "embedded deeply enough" unlike gaps in Japanese relative clauses. Hence, this might imply that gaps in Japanese relative clauses and empty pronouns in Japanese are in fact fundamentally different, and that gaps in relative clauses in Japanese may not be empty pronouns, contrary to Perlmutter's (1972) and Saito's (1985, 1986) hypothesis.

Second, Haig (1976, p. 365, fn. 3) points out another difference between empty pronouns/Pronoun Drop on the one hand and gaps in relative clauses in Japanese on the other, and he attributes this observation to Susumu Kuno as well. Consider (16a-b).

- (16) a. John<sub>i</sub>-ga Boston-ni kita toki, *e<sub>i</sub>* ai ni itta.  
John-Nom Boston-to came when, see to went  
'When John<sub>i</sub> came to Boston, (I) went to see (him<sub>i</sub>).'  
b. \* *e<sub>i</sub>* Boston-ni kita toki, John<sub>i</sub>-ni ai ni itta.  
Boston-to came when, John -to see to went  
(Haig 1976, p. 365)

Based on (16a-b), Haig (1976) claims that 'Pronoun Drop can apply backward only when the referent of the deleted pronoun can be recovered from preceding context.' In (16a), Pronoun Drop applies forward, and the above mentioned pragmatic constraint does not apply. In (16b), however, Pronoun Drop applies

backward, and thus, the discourse-dependent constraint applies. Hence, unless we can identify the referent of *e* from preceding context, we cannot interpret the empty pronoun *e* properly in (16b).

Given this, examine again the Japanese relative clause in (1), repeated here as (17).

- (17) [<sub>S</sub> [<sub>NP</sub> *e<sub>i</sub>* *e<sub>j</sub>* kawaigatte ita inu<sub>j</sub>]-ga sinde  
was-fond-of dog-Nom dying  
simatta] kodomo<sub>i</sub> (= 1)  
ended-up-with child  
'\*a child<sub>i</sub> who [<sub>S</sub> [<sub>NP</sub> the dog<sub>j</sub> *e<sub>i</sub>* was fond of *e<sub>j</sub>*] died'  
(Kuno 1973, p. 239)

If the subject and object gaps in (17), *e<sub>i</sub>* and *e<sub>j</sub>*, are empty positions created by Pronoun Drop (Perlmutter 1972, Saito 1985, 1986), Pronoun Drop must apply backward in (17) as in (16b), because the antecedents, *inu* 'dog' and *kodomo* 'child,' follow the gaps. However, the pragmatic constraint does not apply to (17), and we are not required to get access to preceding context to interpret the gaps in (17) properly (cf. \*16b). Haig (1976) thus claims that Perlmutter (1972) would have to stipulate that 'Pronoun Drop can violate this constraint when the rule could apply to the relative clause construction.' Consequently, the contrast between (16b) and (17) could imply again that there is a fundamental difference between gaps in relative clauses and typical empty pronouns in Japanese (cf. Perlmutter 1972, Saito 1985, 1986).

Third, examples such as (13b) and the following examples cited from Haig (1976, p. 365, fn. 3) could imply that a natural language can adopt a resumptive pronoun strategy to avoid the violation of the Subjacency Condition, even if the language lacks an empty pronoun like English. Namely, the availability of a resumptive pronoun might be independent of the existence of an empty pronoun in a particular language (cf. 5 and 6; cf. 8 and 9).

- (18) ??[<sub>NP</sub> the girl<sub>i</sub> who [<sub>S</sub> the dog that [<sub>S</sub> *she<sub>i</sub>* was  
petting] died]] (cf. 1 and 8)

- (19) ??[<sub>NP</sub> the gentleman<sub>i</sub> who [<sub>S</sub> the suit that [<sub>S</sub> *he<sub>i</sub>* is  
wearing] is dirty]] (cf. 2 and 9)

(Haig 1976)

Haig (1976, p. 365, fn. 3) claims that the English translations of (10b) and (11b) with the resumptive pronouns, *he* and *she*, are totally unacceptable, while (18) and (19) are, for some people, not quite so bad. The resumptive pronoun *she* is in the deeply embedded relative clause in (18), and the copy pronoun *he* is also in the similarly deeply embedded relative clause in (19). Hence, the marginal acceptability of resumptive pronouns in (8-9) might have nothing to do with the availability of empty pronouns in a particular language (cf. Perlmutter 1972, Saito 1985, 1986).

Furthermore, the following example derived from Kuno (1973) could pose a potential problem for Saito's (1985, pp. 342-344) generalization with respect to resumptive pronouns in English and Japanese. This is so, because English and Japanese do not use overt resumptive pronouns in the same way. For this, consider below:

- (20) \*[<sub>NP</sub> the guest<sub>i</sub> that [<sub>S</sub> I have forgotten [<sub>NP</sub> his<sub>i</sub> name]]] (Kuno 1973, p. 237)

(20) is the direct English translation of (14). Whereas the resumptive pronoun *kare* is allowed in the Japanese relative clause in (14), the overt copy pronoun *his* is not in the English relative clause in (20). The contrast between (14) and (20) thus seems to show that the usage differs regarding Japanese copy pronouns and their English counterparts (cf. Saito's 1985, pp. 342-344), and a question arises as to why this should be the case.

If the arguments given above are indeed correct, we seem to lose Perlmutter's and Saito's analysis of Japanese relative clauses in (5-6), and we are required to reconsider the properties of Japanese relativization and the nature of the Subjacency Condition (cf. Ross 1967, Chomsky 1973, 1986, Erteschik-Shir and Lappin 1979, Hawkins 1999, 2004, Kempson et al. 2001, Cann et al. 2005, Hofmeister and Sag 2010, Boeckx 2012, among others). To do so, we should attempt to account for the nature of gaps in relative clauses and empty pronouns in Japanese in a different manner. This is because the properties of gaps in Japanese relative clauses are distinct from the nature of typical empty pronouns in Japanese. Furthermore, it seems to be essential for us to consider why overt resumptive pronouns in Japanese relative clauses must be embedded "deeply enough," why Japanese and English use overt resumptive pronouns differently, and why the gap-filler dependency in Japanese relative clauses appears to violate the Subjacency Condition (see 1 and 2). It also appears to be important for us to clarify how to measure the "depth of embedding" for overt resumptive pronouns (cf. Saito 1985, pp. 342-344). To achieve this, we might want to pay much attention to performance factors such as efficiency and complexity in grammars, and adopt a processing-based analysis of filler-gap and filler-pronoun dependencies based on Hawkins (1994, 1999, 2004), Phillips (1996), Kempson et al. (2001), Cann et al. (2005), Hofmeister and Sag (2010), among other (cf. Keenan and Comrie 1977). I, however, leave these questions for my future research.

#### 4. Implications for Complex Predicates in Japanese

Given the discussion in the preceding section, there seem to remain some potential problems for Perlmutter's (1972) and Saito's (1985, 1986) analysis of Japanese relativization (see 5 and 6). However, part of Saito's (1985, pp. 342-344) generalization about overt

resumptive pronouns in Japanese relative clauses appears to be a correct one. That is, 'an overt resumptive pronoun is allowed only when it is embedded "deeply enough"' (see 8, 9, 13a-b, 14, 18, 19 vs. \*10b, \*11b, \*12a-b; cf. Kuno 1973, Haig 1976). In this section, based on this generalization, I try to suggest that a 'lexicalist mono-clausal analysis' of causatives in Japanese might be more plausible than a 'syntactic bi-clausal analysis' (cf. Kuroda 1965, Kuno 1973, Hale 1980, 1982, Farmer 1980, Miyagawa 1980, Hoshi 1994, Manning, et al. 1999, among others). In other words, here, I wish to suggest that we may be able to parse Japanese complex predicate constructions from left to right quite efficiently and easily, because they may have 'simpler mono-clausal structures.' As a consequence, complex predicate constructions such as Japanese causatives, which seem to have 'shallow structures,' cannot contain an overt resumptive pronoun due to Saito's generalization.

Consider now (21), an instance of the Japanese causative construction.

- (21) John-ga Mary-ni hon -o yom-ase -ta.  
John-Nom Mary-Dat book-Acc read-Cause-Pst  
'John made Mary read the book.'

In (21), the causative verb (*s*)*ase* 'make' is combined with the verb *yom* 'read,' and *yom-ase* is pronounced as one word.

Kuroda (1965), however, proposes that as illustrated in (22), the causative verb (*s*)*ase* is separated from the verb *yom* at the level of Deep Structure. By doing so, he attempts to capture the semantic similarities between Japanese causatives and English causatives at the initial point of the derivation. On Kuroda's analysis, the causative morpheme (*s*)*ase* and the verb *yom* are combined at a later point of the derivation.

- (22) [<sub>S1</sub> John-ga [<sub>S2</sub> Mary-ni hon-o [<sub>V2</sub> yom]] [<sub>V1</sub> ase-ta]] (cf. Kuroda 1965, etc.)

Observe that in (22), the causative verb is *V1* and the verb *yom* is *V2*, and they are considered to be separate predicates at Deep Structure. *V1* is the predicate of *S1*, and *V2* is the verb of *S2*. Hence, under Kuroda's 'syntactic analysis,' Japanese causative has 'biclausal structure' like the one in (22). Consequently, as in (22), the object *hon-o* 'book-Acc' is located inside the embedded clause *S2*.

On the other hand, Hale (1980, 1982), Farmer (1980), Miyagawa (1980), Manning et al. (1999), among others, argue that there is no level where the causative verb (*s*)*ase* is detached from the verb *yom*, and that (21) is assigned 'mono-clausal structure' like the one in (23).

- (23) [<sub>S1</sub> John-ga Mary-ni hon-o [<sub>V1</sub> yom-ase-ta]]

(cf. Hale 1980, Farmer 1980, Miyagawa 1980, etc.)

Here, there is only a single predicate, [<sub>V1</sub> *yom-ase*] ‘read-cause,’ called a ‘complex predicate,’ and there is only a single clause S<sub>1</sub> (cf. S<sub>1</sub> and S<sub>2</sub> in 22). In (23), the object *hon-o* is the direct object of the complex predicate *yom-ase*, and thus, is immediately contained by S<sub>1</sub> (cf. *hon-o* ‘book-Acc’ as the direct object of S<sub>2</sub> in 22).

Given this, consider first (24a-b).

- (24) a. John-ga Mary-ni *e* yom-ase -ta hon  
 John-Nom Mary-Dat read-Cause-Pst book  
 ‘the book that John made Mary read’  
 b. [<sub>S1</sub> John-ga Mary-ni [<sub>S2</sub> *e* [<sub>V2</sub> yom]-u yoo]  
 John-Nom Mary-Dat read to  
 [<sub>V1</sub> *meizi*]-ta] hon  
 order -Pst book  
 ‘the book that John ordered Mary to read’

Both (24a) and (24b) contain relative clauses. Furthermore, (24a) involves the causative construction whose structural properties have been much debated (see 22 vs. 23). (24b), on the other hand, involves the object control construction which has clear ‘bi-clausal structure.’ In (24b), [<sub>V1</sub> *meizi*] ‘order’ is the verb of the matrix clause S<sub>1</sub>, and [<sub>V2</sub> *yom*] ‘read’ is the predicate of the embedded clause S<sub>2</sub>.

Consider now the following sharp contrast between (25a-b):

- (25) a. \*John-ga Mary-ni *sore<sub>i</sub>-o* yom-ase -ta  
 John-ga Mary-Dat it -Acc read-Cause-Pst  
 hon<sub>i</sub>  
 book  
 ‘the book that John made Mary read it’  
 b. [<sub>NP</sub> [<sub>S1</sub> John-ga [<sub>VP1</sub> Mary-ni [<sub>S2</sub> [<sub>VP2</sub> *sore<sub>i</sub>-o*  
 John-Nom Mary-Dat it -Acc  
 [<sub>V2</sub> yom-u]]] yoo [<sub>V1</sub> *meizi*-ta]]] [<sub>N</sub> hon<sub>i</sub>]]  
 read to order-Pst book  
 ‘the book that John ordered Mary to read it’

Significantly, in (25a), the overt resumptive pronoun *sore* ‘it’ is disallowed, whereas the overt copy pronoun *sore* is allowed in (25b). Based on Saito’s (1985, pp. 342-344) generalization, the well-formedness of (25b) is straightforwardly accounted for, because the overt resumptive pronoun *sore* ‘it’ appears to be “embedded deeply enough” as the object of the embedded clause S<sub>2</sub> in (25b). Namely, there are at least four phrasal nodes intervening between the resumptive pronoun and the relative head in (25b), i.e. VP<sub>2</sub>, S<sub>2</sub>, VP<sub>1</sub> and S<sub>1</sub>.

Under Kuroda’s (1965) bi-clausal analysis in (26), however, the ungrammaticality of (25a) might appear to be surprising.

- (26) [<sub>NP</sub> [<sub>S1</sub> John-ga [<sub>VP1</sub> [<sub>S2</sub> Mary-ni [<sub>VP2</sub> *sore<sub>i</sub>-o*  
 [<sub>V2</sub> yom]]] [<sub>V1</sub> ase-ta]]] [<sub>N</sub> hon<sub>i</sub>]]

This is so, because the overt copy pronoun *sore* ‘it’ is also the object of the embedded clause S<sub>2</sub> in (26) under Kuroda’s analysis (cf. 25b). Hence, *sore* in (26) seems to be “embedded” as “deeply” as *sore* in (25b). Observe that in (26), there are also four intervening phrasal nodes between the overt resumptive pronoun [<sub>NP</sub> *sore*] and the relative head [<sub>N</sub> *hon*], i.e. VP<sub>2</sub>, S<sub>2</sub>, VP<sub>1</sub> and S<sub>1</sub>.

Furthermore, compare (26) with a slightly modified version of (14), repeated here as (27).

- (27) [<sub>NP</sub> [<sub>S</sub> *watasi-ga* [<sub>VP</sub> [<sub>NP</sub> [<sub>PP</sub> *kare<sub>i</sub>-[P no]]*  
 I -Nom he - Gen  
*namae*]-o [<sub>V</sub> *wasureta*]]] *okyakusan<sub>i</sub>*]  
 name -Acc forgot guest  
 ‘the guest<sub>i</sub> whose<sub>i</sub> name I forgot’  
 (cf. Kuno 1973, p. 237) (cf. 14)

(27) is acceptable. Under the assumption that the possessor marker *-no* is P, which projects its phrasal node PP (Hawkins 1994, 1999, 2004), there are also four intervening phrasal nodes between the overt resumptive pronoun [<sub>NP</sub> *kare*] and the relative head [<sub>N</sub> *okyakusan*] ‘guest,’ i.e. PP, NP, VP and S. Hence, the resumptive pronoun [<sub>NP</sub> *sore*] in (26) appears to be “embedded” as “deeply” as the copy pronoun [<sub>NP</sub> *kare*] in (27). Hence, this implies that (25a), if it involves ‘syntactic bi-clausal structure’ for Japanese causative as in (26), should be able to contain an overt resumptive pronoun like (27). Contrary to this expectation, (25a) is unacceptable with the overt resumptive pronoun [<sub>NP</sub> *sore*], suggesting that structure (26) might not be the correct structure for (25a).

On the other hand, if we adopt ‘lexicalist mono-clausal structure’ for Japanese causative, we seem to be able to account for the ill-formedness of (25a) together with the unacceptability of (28) exactly in the same way.

- (28) \* [<sub>NP</sub> [<sub>S</sub> John-ga [<sub>VP</sub> Mary-ni *sore<sub>i</sub>-o*  
 John-ga Mary-Dat it -Acc  
 [<sub>V</sub> *age* -ta]]] [<sub>N</sub> hon<sub>i</sub>]]  
 give-Pst book  
 ‘the book that John gave it to Mary’

(28) involves a relative clause with the ditransitive verb [<sub>V</sub> *age*] ‘give.’ As indicated in (28), the overt resumptive pronoun [<sub>NP</sub> *sore*] ‘it’ is disallowed in the relative clause (cf. \*25a).

Under the ‘lexicalist hypothesis,’ (25a) and (28) are given basically the same structures like the ones below:

- (29) a. \* [<sub>NP</sub> [<sub>S1</sub> John-ga [<sub>VP1</sub> Mary-ni *sore<sub>i</sub>-o*  
 [<sub>V1</sub> yom-ase-ta]]] [<sub>N</sub> hon<sub>i</sub>]] (for \*25a)  
 b. \* [<sub>NP</sub> [<sub>S1</sub> John-ga [<sub>VP1</sub> Mary-ni *sore<sub>i</sub>-o*

[<sub>v1</sub> age-ta]] [<sub>N</sub> honi]] (for \*28)

(29a) is the ‘lexicalist mono-clausal structure’ for (25a), and (29b) is for (28). In both (29a) and (29b), the overt resumptive pronoun [<sub>NP</sub> sore] ‘it’ is the object of S<sub>1</sub>, which directly modifies the relative head [<sub>N</sub> hon]. Hence, in (29a-b), there is only two intervening phrasal nodes between the resumptive pronoun and the relative head, i.e. VP<sub>1</sub> and S<sub>1</sub> (cf. 25b and 27). Consequently, the resumptive pronoun [<sub>NP</sub> sore] is not “embedded deeply enough” in (29a-b), and it is thus correctly predicted that the resumptive pronoun is not allowed in both (25a) and (28) unlike the one in (25b) and (27). If the argument here is correct, it implies that there is a significant difference between Japanese causative structure and the English counterpart (cf. Hoji 1985, Saito 1985, 1986, among others).

### 5. Conclusion

In this paper, I have attempted to show that Perlmutter’s (1972) and Saito’s (1985, 1986) analysis of Japanese relative clauses is important. If their analysis is correct, there is nothing surprising concerning the grammaticality of (1) and (2), discovered by Kuno (1973). The Subjacency Condition is part of our innate knowledge of language (Universal Grammar) (Ross 1967, Chomsky 1973, 1981, 1986, etc.), and Japanese and English have basically the same phrase structure (Hoji 1985, Saito 1985, 1986, among others).

I have, however, pointed out that there still appear to remain some potential problems for their analysis of Japanese relativization, and have tried to question the validity of the above mentioned theoretical claims. Furthermore, I have attempted to show that Saito’s (1985) generalization that ‘an overt resumptive pronoun is allowed only when it is embedded “deeply enough”’ seems to be a correct one. However, a question arises as to why it should be the case. It seems to me that not grammatical conventions but human parser requires an overt resumptive pronoun to be embedded “deeply enough” crucially for ease of comprehension/communication (cf. Hawkins 1994, 1999, 2004, among others; cf. Keenan and Comrie 1988; cf. Kempson et al. 2001, Cann et al. 2005). Hence, to deepen our understanding of the nature of competence and performance (Chomsky 1965), it seems very much worthwhile considering the properties of gaps and resumptive pronouns in relative clauses from sentence processing perspectives as well (Hawkins 1994, 1999, 2004, Phillips 1996, Kempson 2001, Cann et al. 2005, Culicover and Jackendoff 2005, Hofmeister and Sag 2010, among others).

+ I leave remaining problems for my future research.

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